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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,418	09/18/2003	Erik Lillicbjerg	NVID-P000635	7450

EXAMINER	
WILSER, MICHAEL P	

ART UNIT	PAPER NUMBER
2109	

MAIL DATE	DELIVERY MODE
04/30/2007	PAPER

7590 04/30/2007
WAGNER, MURABITO & HAO LLP
Third Floor
Two North Market Street
San Jose, CA 95113

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/666,418	Applicant(s) LILLIEBJERG, ERIK	
	Examiner Michael Wilser	Art Unit 2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the original filing of September 18, 2003.

Claims 1-20 are pending and have been considered below.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the figures are hand drawn and, if left in the current condition, would be hard to read upon reproduction. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

3. The drawings are objected to because Figures 3A-3D lack reference characters. Reference characters should be added so that one of ordinary skill in the art can go from the drawings to the specification with little difficulty in understanding what parts of the figure are being discussed. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a

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drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: the examiner notes the use of acronyms (e.g. RAM, DVD, etc.) throughout the specification without first including a description in plain text, as required.
5. On page 13, line 6 the applicant states "task has no requested". The examiner is interpreting this as being a typographical error and that the applicant meant to say "task has not requested".
6. In the specification the applicant discusses particular details of figures 3A-3D but does not use any reference characters. When discussing particular parts of a figure reference characters are needed so that one having ordinary skill in the art can easily go from the specification to the drawing with little difficulty in understanding what parts of the figure are being discussed.

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Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-5 and 8-12 rejected under 35 U.S.C. 102(e) as being anticipated by Shi et al. (US 6,757,897).

Claims 1 and 8: Shi discloses of a method and medium for executing tasks of different priority values (column 1, lines 7-25) comprising:

- a. utilizing preemptive multitasking (column 2, lines 24-41);
- b. utilizing cooperative multitasking (column 4, lines 5-19);
- c. preemptive and cooperative multitasking increase the utilization of the processing power of the processor (column 1, lines 7-65);
- d. higher priority tasks being executed with less interruption than lower priority tasks (column 6, lines 46-57); and
- e. each task is able to request a particular waiting period during execution (column 4, lines 5-19).

Claims 2 and 9: Shi discloses of a method and medium as in Claims 1 and 8 above, and further discloses of:

- a. selecting a task based on priority value and status associated with the task (column 1, lines 26-54);
- b. starting the selected task and designating the task as executing (column 2, lines 9-21);
- c. when executing task requests a waiting period, the task is designated as waiting and another task is selected to begin execution (column 4, lines 5-19);
- d. upon end of waiting period, if the waiting task has a lower priority than the executing task, mark task as interrupted (column 4, lines 30-45);
- e. upon end of waiting period, if the waiting task has a higher priority than the executing task, mark executed task as interrupted and select another task to execute (column 4, lines 30-45); and
- f. designated executing task as completed upon completion and selecting another task to execute (column 6, lines 46-57).

Claims 3 and 10: Shi discloses of a method and medium as in Claims 2 and 9 above, and further discloses of selecting a higher priority task before a lower priority task when possible (column 2, lines 34-49).

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Claims 4 and 11: Shi discloses of a method and medium as in Claims 2 and 9 above, and further discloses of selecting a task dependent on completion of another after the first has completed (column 6, lines 59-67).

Claims 5 and 12: Shi discloses of a method and medium as in Claims 2 and 9 above, and further discloses of setting a timer based on the waiting period (column 6, lines 23-45).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6-7 and 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi et al (US 6,757,897) in view of Bower, III (US 7,051,331).

Claims 6 and 13: Shi discloses of a method and medium as in Claims 1 and 8 above, but does not explicitly discloses that the tasks are basic input output system (BIOS) tasks. However, Bower discloses a method and medium for multitasking in which the tasks are BIOS tasks (column 1, lines 20-27).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have the tasks in Shi be BIOS tasks. One would have

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been motivated to have the tasks be BIOS tasks since these tasks provide an interface between the hardware and software and would allow for the communication to be done in a timely manner.

Claims 7 and 14: Shi and Bower disclose of a method and medium as in Claims 6 and 13 above, and Bower further discloses that the waiting period is requested from a BIOS kernel (column 1, lines 23-27). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have the waiting period in Shi be requested by the BIOS kernel. One would have been motivated to have the waiting period requested by the BIOS kernel since the tasks that are waiting to be controlled are BIOS tasks and therefore would be controlled by the BIOS kernel instead of a normal system kernel.

Claim 15: Shi discloses of a system comprising:

- a. a processor (Figure 1);
- b. the processor operative to utilize preemptive multitasking (column 2, lines 24-41); and
- c. the processor operative to utilize cooperative multitasking (column 4, lines 5-19); for
- d. increasing the utilization of processing power in the processor (column 1, lines 7-65);
- e. ensuring higher priority valued tasks are executed with less interruption than lower priority tasks (column 6, lines 46-57); and

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f. allowing each task to request a particular waiting period during execution (column 4, lines 5-19).

However, Shi does not explicitly disclose that the system contains a basic input output system (BIOS). However, Bower discloses a similar system for multitasking that does include a BIOS (column 3, lines 39-62). Therefore it would have been obvious to one having ordinary skill in the art at the time of invention to have the system in Shi have been a BIOS system. One would have been motivated to have the system be a BIOS system because the BIOS is a common and well used interface between the hardware and software within the computing arts.

Claim 16: Shi and Bower disclose of a system as in Claim 15 above, and Shi further discloses of selecting a higher priority task before selecting a lower priority task when possible (column 2, lines 34-49).

Claim 17: Shi and Bower disclose of a system as in Claim 15 above, and Shi further discloses of selecting a task dependent on completion of another after the first has completed (column 6, lines 59-67).

Claim 18: Shi and Bower disclose of a system as in Claim 15 above, and Shi further discloses that the system has a timer (column 6, lines 23-45).

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Claim 19: Shi and Bower disclose of a system as in Claim 15 above, and Bower further discloses that the waiting period is requested from a BIOS kernel (column 1, lines 23-27). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have the waiting period in Shi be requested by the BIOS kernel. One would have been motivated to have the waiting period requested by the BIOS kernel since the tasks that are waiting to be controlled are BIOS tasks and therefore would be controlled by the BIOS kernel instead of a normal system kernel.

Claim 20: Shi and Bower disclose of a system as in Claim 20 above, and Shi further discloses that the system comprises a plurality of hardware components (Figure 1).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Chan et al. (US 2004/0010773) Method and apparatus for displaying debug codes of a basic input/output system.
- b. Bloch et al. (US 2002/0188713) Distributed architecture for a telecommunications system.
- c. Jones et al. (US 2002/0069308) Method and apparatus for delivering digital multimedia content.

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- d. Sueyoshi et al. (US 6,487,612) Information processing apparatus, information processing method, and recording medium.
- e. Daigle (US 5,795,297) Ultrasonic diagnostic imaging system with personal computer architecture.
- f. Anderson (US 5,465,335) Hardware-configured operating system kernel having a parallel-searchable event queue for a multitasking processor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wilser whose telephone number is (571) 270-1689. The examiner can normally be reached on Mon-Fri 7:30-5:00 EST (Alt Fridays Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on (571) 270-1065. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MPW
March 25, 2007

James Myhre
Supervisory Patent Examiner



KIEU VU
PRIMARY EXAMINER